# **EXHIBIT B**

# UNITED STATES DISTRICT COURT NORTHERN DISTRICT OF CALIFORNIA SAN FRANCISCO DIVISION

ORACLE AMERICA, INC.

Plaintiff,

V.

Case No. 3:10-cv-03561-WHA

GOOGLE, INC.

Defendant.

SUPPLEMENTAL EXPERT REPORT OF DR. ALAN J. COX

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Appendix A. Resume of Alan J. Cox, Ph.D.

Appendix B. Additional Documents Reviewed.

### I. ASSIGNMENT

- 1. My name is Alan J. Cox. I submitted a rebuttal report in this matter on October 3, 2011 which I revised on October 21, 2011 and on November 25, 2011 (my "First Report"). My First Report was written in response to the copyright damages claims made in Dr. Cockburn's Report of September 12, 2011 which he revised on September 15, 2011 (the "Second Cockburn Report" or "Second Report"). Dr. Cockburn has issued a third report, dated February 3, 2012 (the "Third Cockburn Report" or "Third Report") which also included claimed copyright damages. In the Third Report, Dr. Cockburn incorporates, by reference, his reply to my First Report ("Reply Report"), dated October 10, 2011.
- 2. I have been asked to review Dr. Cockburn's Third Report and to report my findings that are responsive to new material in that report. I have also been asked to correct any errors in his revised calculations.

# II. SUMMARY OF CONCLUSIONS

- 3. I continue to hold the positions set forth in my First Report. I have come to the following additional conclusions based upon my review of Dr. Cockburn's Third Report:
  - Dr. Cockburn's new methods of apportionment rely on methodologies and assumptions that are either unreliable or incorrect.
  - Correcting his assumptions reduces the estimate of the lower bound Value of the Copyrights, using the less unreliable of his new methodologies (the "group and value" approach), to \$4.4 million. This is the corrected lost license fee that would arise out of a hypothetical negotiation.
  - I calculated a ceiling for alleged wrongful profits damages, using the lower bound of Dr. Cockburn's Percentage Apportionment for Copyrights, again using his new group and value approach. On this basis I calculate wrongful profits of \$3.5 million for use of the copyrights at issue in this case.
  - I also recalculated damages on the basis of a hypothetical license based on Sun's history of licensing using the lower bound of Dr. Cockburn's Percentage Apportionment for Copyrights using the group and value approach. A hypothetical license based on the history of licensing to Danger and to handset manufacturers in combination with the group and value approach would have resulted in a royalty payment of \$12.2 million.

<sup>&</sup>lt;sup>1</sup> Third Report ¶ 650.

• Finally, I recalculated lost profits damages using the lower bound of Dr. Cockburn's Percentage Apportionment for Copyrights under the group and value approach. On this basis I calculate lost profits damages to be \$2.1 million

# III. QUALIFICATIONS AND DOCUMENTS REVIEWED

4. I have attached, as Appendix A, my resume that has been updated from the resume attached to my previous report. Appendix B is a complete list of the documents not previously identified I have reviewed in preparing this report. I have also discussed this matter with Dr. Leonard and worked with him on the overlapping aspects of our reports.

### IV. OUTLINE OF REPORT

5. In this report I first describe, in general terms, Dr. Cockburn's new calculation of copyright damages. I then describe some general criticisms of the technique and offer some corrections based upon assumptions that comport more closely with reality. I then discuss adjustments to my calculation of Google's allegedly wrongful profits based upon Dr. Cockburn's new calculations. I also provide revised calculations of the royalty that would result from a hypothetical license fee and from damages based upon lost profits. I also adjust my damages calculations, as appropriate, based on new information in the Third Cockburn Report.

### V. BACKGROUND

- 6. In its complaint in this matter, Oracle claims that some of its patents and copyrighted material are infringed by Google in its Android operating system. In his Second Report, Dr. Cockburn calculated what he considered to be an appropriate remedy on the basis of the purported value, to Google, of the patents and copyrights listed in the complaint. That calculation was based, in part, on the offer that Sun made to license its technology to Google. The court rejected that calculation.
- 7. In his Third Report, Dr. Cockburn offers two new methods for determining the hypothetical license fee that Oracle would have received from Google for licensing the copyrighted material that it alleges Google has infringed. He terms these two methods the "group and value" method and the "independent significance" method. Dr. Cockburn claims that Oracle's lost license fee is somewhere between \$34.7 million and \$111.9 million based on the

"group and value" method, and is \$85.5 million based on the "independent significance" method.<sup>2</sup>

- 8. Dr. Cockburn calculates these numbers by applying a percentage that he claims represents the value of the copyrighted material allegedly infringed relative to the entire bundle of rights that was being negotiated for in 2006. Under the "group and value" method, he applies a percentage ranging from 5.1 percent to 16.4 percent, and under the "independent significance" method, he applies a percentage of 12.5 percent.
- 9. It is convenient to describe what Dr. Cockburn does to respond to these instructions by writing down his basic formula for the value of the copyrights-in-suit:

Value of the Copyrights-in-Suit = 
$$Z \times (LR + \pi(A))$$

Z is the ratio of the value of the copyrighted material at issue in this case to the value of all intellectual property offered by Sun (the "Apportionment for Copyrights"). The terms in brackets are Sun's profits from entering into a license agreement with Google ("Sun's Profits"). They include, LR, the licensing revenue that Sun expected to be paid by Google and,  $\pi(A)$ , the profits that Sun expected to earn from Project Armstrong, the business of adding value to the Android platform.

- 10. The licensing revenue is based on the proposals made by Sun for it to license its intellectual property for \$98.7 million. Part of this fee is a fixed \$60 million paid over three years while the remainder is a capped share of Google's advertising revenues. To the \$98.7 million, Dr. Cockburn adds \$27.8 million. These are additional revenue sharing payments to Sun had there been no cap. In other words, LR is equal to \$98.7 million plus \$27.8 million, according to Dr. Cockburn. Finally, he adds what he claims are the profits that Sun expected to make from Project Armstrong ( $\pi$ (A)) of \$557.2 million, as stated in a February 2006 presentation.
  - 11. The resulting formula is then:

Value of the Copyrights-in-Suit =  $Z \times (\$98.7 \text{ million} + \$27.8 \text{ million} + \$557.2 \text{ million})$ 

<sup>&</sup>lt;sup>2</sup> Third Report ¶ 3.

The values that Dr. Cockburn assigns to Z for the "group and value" and "independent significance" methods then lead to the claimed lost license fees noted above.

12. As Dr. Leonard has noted, there are significant flaws in Dr. Cockburn's calculation of both the calculation of Z and the pre-apportionment value—the figures in parentheses in the above formula. I agree with and adopt Dr. Leonard's characterization of those flaws, which I incorporate here by reference.

### VI. PROBLEMS WITH DR. COCKBURN'S NEW METHODOLOGY

# A. Dr. Cockburn's "Independent Significance" Method Is Unsupported and Arbitrary

- 13. Dr. Cockburn's "Independent Significance" method is conclusory. Although he purports to rely on a variety of factors, his ultimate determination that the proper copyright apportionment is 12.5 percent under this method is nothing more than a number he has arbitrarily chosen without reference to nearly adequate support. After discussing various factors he claims to have considered, he jumps to the unexplained conclusion that the patents-in-suit are worth 25 percent of the rights that were being negotiated in 2006.<sup>3</sup> He similarly jumps to the unexplained conclusion that the copyrighted material allegedly infringed is worth 12.5 percent of the rights that were being negotiated in 2006.<sup>4</sup>
- 14. The complete lack of explanation for how these percentages were derived renders them unsupported, arbitrary and speculative.

# B. Dr. Cockburn's 5.1 Percent to 16.4 Percent Copyright Apportionment Range Under the "Group and Value" Method Is Unreliable

- 15. In order to arrive at his Apportionment for Copyrights percentages (Z in the equation above), Dr. Cockburn relies on cumulatively questionable assumptions. These assumptions are individually suspect and, taken as a whole, they are even more unreliable.
- 16. First, Dr. Cockburn calculates a range for the apportionment of the value of the patents-in-suit. Second, relying on Dr. Shugan's conjoint analysis, he concludes that having a

<sup>&</sup>lt;sup>3</sup> Third Cockburn Report ¶¶ 67, 423.

<sup>&</sup>lt;sup>4</sup> Third Cockburn Report ¶ 671.

large number of applications available for a smartphone has one half of the value of ensuring that applications launch within one second. Third, he assumes that having a large number of applications available is solely attributable to the allegedly infringed APIs. Fourth, he assumes that the alleged infringement of the patents-in-suit are solely responsible for ensuring that applications launch within one second.<sup>5</sup>

- 17. Dr. Leonard has critiqued Dr. Cockburn's "group and value" apportionment for the patents-in-suit. In my opinion, Dr. Leonard's critique is sound. To the extent that the "group and value" methodology is useful at all, I agree with Dr. Leonard's reasons for concluding that the apportionment overstates the value of the patents-in-suit.
- 18. Dr. Leonard has also critiqued Dr. Cockburn's reliance on Dr. Shugan's conjoint analysis. Despite the problems with Dr. Shugan's analysis the conjoint analysis can offer some insight into the *relative* importance of having many applications versus applications that launch quickly. That is, Dr. Shugan's analysis may provide some support for the conclusion that having a large number of applications is less important that ensuring that applications launch quickly. However, as Dr. Leonard points out, because Dr. Shugan artificially limited his study to seven factors, the conjoint analysis likely overstates the *absolute* value of those factors.
- 19. Dr. Cockburn's third assumption is untenable. Even assuming that the allegedly infringed APIs contributed to the wide range of applications available on the Android platform, Dr. Cockburn fails to credit the many other factors that have contributed to the development of those applications. At a minimum, this includes the many other Android API packages (over one hundred) that Oracle has not accused of infringement. This also means that Dr. Cockburn's analysis overstates the value of the allegedly infringed APIs.
- 20. The fourth assumption is similarly misguided. Even assuming the patents-in-suit played some role in ensuring quick application launches, Dr. Cockburn ignores the unpatented elements that contributed to decreased launch time. As with his other errors, this led Dr. Cockburn to overstate the value of the patents-in-suit, which in turn led him to overstate the value of the allegedly infringed APIs.

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<sup>&</sup>lt;sup>5</sup> Third Cockburn Report ¶ 419.

- 21. Because Dr. Cockburn's copyright apportionment range relies on *all* of these assumptions, if *any* of them are unreliable, then his range is unreliable. Because *all four* of his assumptions are unreliable, the problems with his ultimate range are compounded. Because all of his errors have the effect of overstating the value of the API copyrights, to the extent that his range is meaningful at all, I conclude that only the low end of that range is meaningful.
- 22. There are issues with both the calculation of Z, the ratio of the value of the copyrights-in-suit to the value of all intellectual property offered by Sun, in addition to those discussed in the previous section. There are also problems and with the calculation of Sun's Profits. I discuss them sequentially. As an initial matter, however, the formula for the value of the copyrights-in-suit presented above relies on the incorrect idea that there is an iron-clad equality between the benefits that two parties enjoy in such a licensing arrangement. In effect, Dr. Cockburn treats the license fee (or reasonable royalty damages) as an accounting plug that will equalize the deal between the two sides. As Dr. Leonard correctly points out, there is no reason that the value to the two sides of such a deal must be equal.
- 23. In reality, the appropriate value of a license for intellectual property is generally based upon both 1) the increased profit that comes to the licensee from using the intellectual property and 2) the profits lost, if any, to the licensor as a result of licensing. Dr. Cockburn fails to correctly take either of these into account in his calculation of the copyright apportionment. First, he does not attempt to directly determine the increased value that is brought to Google by the use of the portfolio of intellectual property to be licensed under the 2006 proposal. Second, he ignores the evidence discussed in my First Report (Sections IV.F.2 and 3 starting on page 43) that Sun had failed to implement strategies to increase its presence in the mobile industry. Consequently it had few prospects of being able to earn substantial profits in the industry by itself. Under those circumstances, Sun would have been willing to license its technology for nothing if it thought that it could make a higher profit from a collaboration with Google than from trying to establish its own smartphone operating system.

### VII. CORRECTED VALUE OF THE COPYRIGHT

24. In Exhibit 1 to this supplemental report, I adjusted Dr. Cockburn's estimate of the Value of Copyrights, and hence to his estimate of the lost licensing fee. These corrections are

based upon corrections to the licensing revenue and lost profits claimed by Sun. . The resulting estimates of the Value of Copyrights are shown on Exhibit 1, row [g].

- 25. I begin, in column (1), with Dr. Cockburn's numbers, using the low end of his "group and value" range. This results in a Value of Copyright of \$34.7 million.
- 26. Column (2) shows the result of correcting the Project Armstrong profits as shown in row (k) to Exhibit 5 of my First Report. There I show the cumulative impact of making the corrections I described in my First Report.<sup>6</sup> That results in allegedly lost Armstrong Profits of \$47 million, to which I add the \$27.8 million of added revenue share and the \$98.7 million licence revenues, totalling \$174.2 million in "Total Unapportioned Value." One important point to note about this scenario is that row (b) is shown blank under this scenario. This is because I have already subtracted costs of goods sold and operating costs in calculating the \$47 million lost Profits on Project Armstrong.<sup>7</sup> This gives a Value of Copyright of \$10.1 million.
- 27. In columns (3) I make the additional adjustment of removing the \$27.8 million in additional profit sharing that results from Dr. Cockburn's removal of the cap on revenue sharing. Dr. Cockburn claims that removal of the cap is warranted because Sun would have been licensing Google to proceed with version of the APIs that was not fully compatible with Java's implementation. This, however, is double-dipping, because Dr. Cockburn has already adjusted upward for the lost Armstrong monetization, which he claims was lost because of the lack of compatibility with Java's implementation. I therefore conclude that the cap on revenue sharing should not be lifted. This correction leads to \$6.5 million in the value of the copyright.
- 28. Finally, in column (4) I go back to the scenario which is, in my opinion, the most reasonable. It is made up of a \$28 million license fee, \$47.7 million in lost profits from Project Armstrong and no additional revenue sharing due to the removal of the cap. This leads to copyright values and lost hypothetical license fee of \$4.4 million.

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<sup>&</sup>lt;sup>6</sup> Recall that I corrected for the lower deployment of Android-based phones, the impact of competition, deducted operating costs and cost of goods sold. Finally I discounted the revenue for Project Armstrong Profits back to 2006 under a very conservative 15 percent discount rate.

<sup>&</sup>lt;sup>7</sup> In Exhibit 5 of my First Report, I show that for the corrected level of Project Armstrong Revenues (shown in row (b)) the appropriate level of operating costs is \$26.2 million.

# VIII. UPDATED DAMAGES CALCULATIONS AFTER CORRECTING DR. COCKBURN'S ERRORS

# A. Introduction

I now describe the revisions to my First Report that result from Dr. Cockburn's revised valuations of the copyrighted material.

### B. Alleged Wrongful Profits Derived from the Android Platform

- 29. I understand that wrongful profits are calculated as total revenues minus all costs associated with those revenues and minus the contribution to those profits that is made by factors other than the copyrighted work. At the time of my First Report, Google had still not recovered all the costs of developing, maintaining and marketing the Android system. This was true when I expensed research and development costs by deducting them from revenue in the year that they were incurred, as is often done in the industry. It was also true when I amortized those costs over five years, which is also consistent with the economic treatment of research and development costs in the software industry. Despite my efforts to be even-handed in my calculation, Dr. Cockburn accused me of front-end loading these investment costs. In fact, amortizing over ten years would still have resulted in zero profits by the end of 2011.
- 30. Dr. Cockburn appears to acknowledge that a large part of the success of Android is due to the fact that it is an open-source system. He attempts to blunt this by claiming that the decision to develop an open source system dictated the choice of the Java programming language and, therefore, the use of the APIs.<sup>8</sup> However, there are many examples of successful open-source programming languages, operating systems and applications that are open source and that are based on C family and languages other than Java. Two leading examples of these are, of course, the Linux operating system and the Mozilla Firefox web browser.<sup>9</sup>
- 31. As I said in my report and my deposition, the evidence that I have reviewed shows that the contribution made by Google itself explained virtually all, if not all, of the success

<sup>&</sup>lt;sup>8</sup> See ¶ 22 of Cockburn Reply Report.

http://en.wikipedia.org/wiki/Linux kernel#Programming languages and https://developer\_mozilla.org/en/The\_Mozilla\_platform "Much of the Mozilla project is written in JavaScript."

of the Android operating system. However, I also, for sake of argument, calculated the portion of Google's Android profits attributable to factors other than the alleged infringement of the APIs at issue. I did this by assuming, for sake of argument, that Dr. Cockburn's copyright apportionment analysis was reliable. Because Dr. Cockburn has revised his copyright apportionment analysis, I now similarly revise my analysis of Google's allegedly wrongful profits, as shown in Exhibit 2a and 2b. These exhibits form my First Report updated to account for Dr. Cockburn's new calculations are labelled as their original exhibit number from my First Report, followed by the word "Updated." They are attached to the last page of this report. The only change to these Exhibits is that I have replaced the 15 percent and 8 percent apportionment columns that were based on the Dr. Shugan's conjoint study with a new 5.1 percent apportionment column, reflecting the low end of Dr. Cockburn's new "group and value" approach.

- 32. Note, however, that the "group and value" apportionment represents a different ratio than Dr. Cockburn's prior apportionment figure. Dr. Cockburn's prior apportionment was based on Dr. Shugan's conjoint analysis, which purported to determine the percentage of the value of the Android platform attributable to the API copyrights. In contrast, the 5.1 percent apportionment from the "group and value" approach purports to represent the percentage of the value of the intellectual property that Sun proposed to license in the 2006 proposal that the API copyrights represent. The value of the platform as a whole includes more than just the value of the licensed intellectual property. Thus, applying an apportionment of 5.1 percent actually overstates the profits attributable to the API copyrights.
- 33. In my view, all items listed from TAC down through Milestone payments in Exhibits 2a and 2b are real costs that should all be deducted from revenues to determine profit, in this case zero. However, these tables show the amount the profits allowing for different levels of deductions. For instance, if it is determined that Milestone Payments and the Purchase Price of Android are not appropriate deductions, the remaining profit earned on the Android system is \$45.4 million when amortizing Engineering Expenses, as seen on Exhibit 2b Updated. Allocating this profit to the copyright at issue using Dr. Cockburn's Apportionment for

Several other examples of open software are listed at <a href="http://en.wikipedia.org/wiki/Open source#Computer software">http://en.wikipedia.org/wiki/Open source#Computer software</a>.

Copyright results in an alleged wrongful profit of between \$2.3 million due to the alleged infringement of the relevant APIs.

- 34. In light of Dr. Cockburn's Third Report, I also reviewed my third computation of wrongful profit that I described in my First Report.<sup>10</sup> I undertook that analysis in light of the negative profits Android has earned. To the extent that any of Google's Android-related profits are attributed to the allegedly infringed API copyrights, it was and is my opinion that this third computation is the most appropriate way to calculate Google's profits attributable to the alleged infringement of the API copyrights. However, I had concluded (as I still conclude) that the success of the Android platform is entirely attributable to Google management, Google's implementation of its open-source strategy, Google's design and other factors unrelated to the copyrights at issue in the case, indicating that all profits should be allocated to Google under a wrongful profits analysis.
- 35. In my previous report I undertook the calculation of the economic measure of wrongful profits on the basis of a corrected version of Dr. Shugan's analysis, for purposes of argument only. Dr. Shugan's analysis purported to determine the portion of Google's Android revenue that is attributable to the APIs and I calculated incremental profits that arose from that increase in sales.
- 36. In his latest report, Dr. Cockburn backs away from his reliance on Dr. Shugan, and instead proposes two new methodologies, "group and value" and "independent significance." Neither of these approaches purports to determine the portion of the sales attributable to the APIs at issue in this case. Instead, they purport to determine the portion of *the 2006 bundle of rights* attributable to the APIs. This means they cannot serve as a direct replacement for the conjoint-based apportionment that Dr. Cockburn previously relied upon.
- 37. However, the "group and value" apportionment can be used to calculate wrongful infringers' profits attributable to the alleged copyright infringement in a different way. Such a calculation could not have been undertaken on the basis of Dr. Cockburn's previous report. As I mentioned above, the values that Dr. Cockburn provided in his previous report purported to allocate a proportion of Android's profits and sales to the relevant APIs. He has now provided an estimate of the proportion of the licensed intellectual property attributable to the copyright at

issue and we can use that to estimate the proportion of the revenue attributable to the relevant APIs.

- 38. In addition to the APIs' proportion of the value of the entire portfolio of intellectual property to be licensed, we also have an estimate of the amount that Google was willing to pay for the use of the entire portfolio. In the 2006 proposal, Sun proposed that it would receive a 10 percent share of the revenue, with a revenue-sharing cap. Dr. Cockburn has argued that lifting the cap is warranted for the actual Android implementation, which subsets and supersets the libraries in Sun's Java implementation.
- 39. Thus, Sun indicated that it was willing to accept 10 percent of revenues (without a cap) in return for licensing its entire portfolio of IP under the 2006 proposal. That is, Sun implicitly proposed that the remaining 90 percent of revenues was available to Google to recover all its costs and cover any profit attributable to factors other than Sun's IP. That amount (that is all profits remaining after deducting taxes, operating expenses, engineering expenses and the costs of purchasing Android) represents Google's contribution.
- 40. I do not include the \$60 million lump sum payment that was part of the 2006 proposal. This amount is appropriately amortized over the Android sales for several more years. Given Android's growth, the proportion of that lump-sum payment attributable to sales through September 2011, or even 2012, is relatively small. In addition the \$60 million is often referenced as compensating Sun for its "current business risk," which is distinct from the running royalty portion of the license agreement.
- 41. We can allocate the proportion of the contribution that is due to just the APIs at issue in this case using, for sake of argument, the low end of the range from Dr. Cockburn's "group and value," 5.1 percent.
- 42. Applying the 10 percent share of Android revenue attributable to Sun's portfolio of IP to the \$690.8 million in Android related revenue through September 2011 gives \$69 million. Multiplying that by 5.1 percent gives profits attributable to the API copyrights of \$3.5 million. For the reasons I have discussed above, the assumptions Dr. Cockburn relied upon to

<sup>&</sup>lt;sup>10</sup> See section IV.E.2.c starting at page 41 of my First Report.

<sup>&</sup>lt;sup>11</sup> See Deposition of Andrew E. Rubin, April 5, 2011, Exhibit 9 (GOOGLE-01-00017221-227)) and Deposition of Vineet Gupta, July 26, 2011, Exhibit PX293 (OAGOOGLE0000357426-441)

reach this apportionment overstate the contribution of the APIs at issue. The \$3.5 million therefore sets a ceiling on wrongful infringers' profits attributable to the allegedly infringed API copyrights.

# C. Adjusting Dr. Cockburn's Hypothetical License Based on Sun's Licensing History

43. In my First Report, I also described a royalty for a hypothetical license based on the Danger license. I show the results of using the same "Apportionment for Copyrights" in "Exhibit 6a Updated." The resulting royalty is \$12.2 million.

# D. Adjusting Dr. Cockburn's Lost Profits Calculation

44. In my First Report, I corrected Dr. Cockburn's calculation for profits allegedly lost as a result of use of the APIs at issue in this case. I undertook an apportionment of those lost profits again on the basis of Dr. Shugan's conjoint analysis. In light of the fact that Dr. Cockburn is now placing little weight on the Shugan analysis, I repeat my analysis using the new apportionment numbers in the Third Report. In Figure 4a Updated, I show the adjustment to Dr. Cockburn's Java ME lost profits calculation. Using Dr. Cockburn's lower bound, the portion of the lost profits from Java ME due to the APIs at issue in this case is \$1.2 million. Multiplying estimated losses on project Acadia by the same apportionment percentage gives lost profits from Project Acadia due to the APIs at issue in this case of \$0.9 million. Adding up these numbers gives lost profits damages of \$2.1 million.

Alan J. Cox

Dated: February 17, 2012

<sup>&</sup>lt;sup>12</sup> See Exhibit 19 to Dr. Cockburn's Third Report.

# Exhibit 1 Alleged Infringer's Profits Due to the Copyrights In Suit 2007-2011

Using Dr. Cockburn's Lower Apportionment Bound<sup>4</sup>

		Come Di.	CUCI	During Lowe	LIVE		Juli	u			
		Cockburn's ssumptions	Various Adjustments to Dr. Cockburn Assumptions								
		(1)		(2)		(3)		(4)			
	Assumptions for Total Unapportioned Value										
	Starting Point License	\$ 98.7	\$	98.7	\$	63.3	\$	28.0			
	Project Armstrong	557.2		47.7		47.7		47.7			
	Removal of Ad Revenue Share Cap	27.8		27.8		-		-			
(a)	Total Unapportioned Value <sup>1</sup>	\$ 683.7	\$	174.2 8	\$	111.0 9	\$	75.7 <sup>10</sup>			
<b>(b)</b>	Engineering Support Value	\$ 86.2 2									
(c)	Total Value of IP <sup>3</sup>	\$ 597.5	\$	174.2	\$	111.0	\$	75.7			
( <b>d</b> )	Top Patents' Share of Patent Value <sup>4</sup>	10.5 %		10.5 %		10.5 %		10.5 %			
(e)	Value of Patents '104, '205, '720 <sup>5</sup>	\$ 59.2	\$	17.3	\$	11.0	\$	7.5			
<b>(f)</b>	Value of Patents '104, '205, '720, '702, '520, '476 <sup>6</sup>	\$ 69.5	\$	20.3	\$	12.9	\$	8.8			
(g)	Value of Copyrights <sup>7</sup>	\$ 34.7	\$	10.1	\$	6.5	\$	4.4			

#### **Notes and Sources:**

All units in millions of U.S. Dollars unless otherwise stated.

<sup>&</sup>lt;sup>1</sup> According to Dr. Cockburn's Exhibit 35, the "Total Unapportioned Value" is "based on \$98.7M Starting Point License + \$557.2M Project Armstrong operating margin + \$27.8M in Ad Revenue sharing." See Exhibits 24, 35, and ¶7 of February 3, 2012 Expert Report of Dr. Iain M. Cockburn. The sum of this row, across all columns, is the sum of each Assuption for Total Unapportioned Value.

<sup>&</sup>lt;sup>2</sup> Sun's projected Project Armstrong operating expenses. See Exhibit 35 of February 3, 2012 Expert Report of Dr. Iain M. Cockburn. See also "Project Armstrong: Business Model," February 2006, OAGOOGLE100166874 - OAGOOGLE100166899, at OAGOOGLE100166884.

 $<sup>^{3}</sup>$  (c)=(a)-(b)

<sup>&</sup>lt;sup>4</sup> 10.5% is Dr. Cockburn's lower bound for the Top Patents' Share of Patent Value and 39.2% is Dr. Cockburn's upper bound for the Top Patent's Share of Patent Value under his "Group and Value Approach." See Exhibit 35 and ¶7 of February 3, 2012 Expert Report of Dr. Iain M. Cockburn.

<sup>&</sup>lt;sup>5</sup> (e) = (c) / (1.5 + 17.4% / 2 + (1 - (d)) / (d)). See Exhibit 35 of February 3, 2012 Expert Report of Dr. Iain M. Cockburn.

 $<sup>^{6}</sup>$  (f) = (e) \* (1 + 17.4%). See Exhibit 35 of February 3, 2012 Expert Report of Dr. Iain M. Cockburn.

<sup>&</sup>lt;sup>7</sup> (g)=(f)/2. According to Dr. Cockburn, the copyrights have value equal to half of the patents at issue. See Exhibit 35 of February 3, 2012 Expert Report of Dr. Iain M. Cockburn.

<sup>&</sup>lt;sup>8</sup> Same as footnote 1 (column (1), row (a)), but the \$557.2 million Project Armstrong value is adjusted to the \$47.7 million value calculated in Exhibit 5, row(k) of Expert Report of Alan Cox, revised October 21, 2011. Engineering Support Value, row (b), is not applicable because operating expenses are accounted for in the the \$47.7 million calculation.

<sup>&</sup>lt;sup>9</sup> Same as footnote 8, but the \$28 million revenue share value is adjusted to \$0 and but the \$98 million starting point license value is adjusted to \$63 million (the average of \$98 and \$28 million).

<sup>&</sup>lt;sup>10</sup> Same as footnote 9, but the \$98 million starting point license value is adjusted to \$28 million. To summarize, this value is the \$28 million starting point license + \$47.7 million Project Armstrong value + \$0 in Ad Revenue sharing = \$75.7 million.

# Exhibit 2a Updated Running Profit and Loss Statement of the Android Platform Assuming Expensing of Engineering Expenses January 2008 - September 2011

Line Item	2	Гotal 008 - 2011	After L	al Revenue Subtracting Line Item	ŀ	Apportioned by 5.1% <sup>3</sup>				
(1)		(2)	Millions o		(4) 3)*5.1%					
Revenue <sup>1</sup> Android Gross Ad Revenues Nexus Phone (DTC) Revenues Android Market Revenues	\$	544.3 115.2 31.3								
Total Revenue	\$	690.8	\$	690.8						
Cost of Sales <sup>1</sup> TAC Operations COS (incl. DTC)	\$	180.6 20.7 120.1	<b>pr</b> \$	510.2 489.6 369.5	\$	25.9 24.9 18.8				
Selected Operating Expenses <sup>1</sup> Marketing Product Management ("PM") Sales Expenses	\$	126.4 11.0 15.9	\$	243.0 232.1 216.2	\$	12.3 11.8 11.0				
Engineering Expenses	\$	356.7	\$	(140.5)	\$	(7.1)				
Purchase Price of Android <sup>2</sup> Milestone Payments	\$	10.89 60.00	\$	(151.3) (211.3)	\$	(7.7) (10.7)				

#### **Notes and Sources:**

<sup>&</sup>lt;sup>1</sup> See Exhibit 3b, column (5) of October 3, 2011 Report of Dr. Alan Cox. All data are actual except September 2011 forecast.

<sup>&</sup>lt;sup>2</sup> Google agreed to purchase Android on June 30, 2005 (GOOGLE-00303922). Milestone payments totaled \$60 million, all of which were paid out (GOOGLE-00303922; GOOGLE-00303930 and interview with Aditya Agarwal).

<sup>&</sup>lt;sup>3</sup> 5.1% is Dr. Cockburn's lower bound for the Apportionment of Copyrights under his "Group and Value Approach." See Exhibit 35 and ¶7 of Feburary 3, 2012 Expert Report of Dr. Iain M. Cockburn.

# Exhibit 2b Updated Running Profit and Loss Statement of the Android Platform Assuming Amortization of Engineering Expenses January 2008 - September 2011

Line Item	Total 008 - 2011	After L	al Revenue Subtracting ine Item	Apportioned by 5.1% <sup>3</sup>			
(1)	 (2)	Millions of	YU.S. Dollars)- (3)		(4)		
(1)	(2)		(2) = (3)	(3	3)*5.1%		
Revenue <sup>1</sup>							
Android Gross Ad Revenues	\$ 544.3						
Nexus Phone (DTC) Revenues	115.2						
Android Market Revenues	31.3						
<b>Total Revenue</b>	\$ 690.8	\$	690.8				
		pre	ev(3) - (2)				
Cost of Sales <sup>1</sup>							
TAC	\$ 180.6	\$	510.2	\$	25.9		
Operations	20.7		489.6		24.9		
COS (incl. DTC)	120.1		369.5		18.8		
Selected Operating Expenses <sup>1</sup>							
Marketing	\$ 126.4	\$	243.0	\$	12.3		
Product Management ("PM")	11.0		232.1		11.8		
Sales Expenses	15.9		216.2		11.0		
Amortized Engineering Expenses <sup>4</sup>	\$ 170.8	\$	45.4	\$	2.3		
Purchase Price of Android <sup>2</sup>	\$ 10.89	\$	34.5	\$	1.8		
Milestone Payments	60.00		(25.5)		(1.3)		

#### **Notes and Sources:**

<sup>&</sup>lt;sup>1</sup> See Exhibit 3b, column (5) of October 3, 2011 Report of Dr. Alan Cox. All data are actual except September 2011 forecast.

<sup>&</sup>lt;sup>2</sup> Google agreed to purchase Android on June 30, 2005 (GOOGLE-00303922). Milestone payments totaled \$60 million, all of which were paid out (GOOGLE-00303922; GOOGLE-00303930 and interview with Aditya Agarwal).

<sup>&</sup>lt;sup>3</sup> 5.1% is Dr. Cockburn's lower bound for the Apportionment of Copyrights under his "Group and Value Approach." See Exhibit 35 and ¶7 of Feburary 3, 2012 Expert Report of Dr. Iain M. Cockburn.

<sup>&</sup>lt;sup>4</sup> See Exhibit 3c of October 3, 2011 Report of Dr. Alan Cox.

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# Exhibit 4a Updated Adjustment of Dr. Cockburn's Java ME Lost Profits Calculation Fiscal Years 2009 - 2012

								Total	
			 FY2009	 FY2010		FY2011	FY2	009 - FY2011	 FY2012
			 	 (Т	Chou	sands of U.S. l	Dollars	)	 
		Forecasted Java Mobile/Embedded Revenue ("High" Case) <sup>1</sup>	\$ 129,165	\$ 136,149	\$	136,149	\$	401,463	\$ 136,149
(a)		Forecasted Java ME Revenue ("High" Case) <sup>2</sup>	108,757	117,819		117,819		344,395	117,819
<b>(b)</b>		Actual Java ME Revenue <sup>3</sup>	97,654	95,515		74,122		267,291	74,122
(c)	(a) - (b)	Java ME Revenue Variance from Forecast	11,103	22,304		43,698		77,105	43,698
		Incremental Costs							
		Incremental cost of goods sold <sup>4</sup>	\$ 842	\$ 1,691	\$	3,313	\$	5,847	\$ 3,313
		Incremental sales expenses <sup>5</sup>	1,110	2,230		4,370		7,711	4,370
<b>(d)</b>		<b>Total Incremental Costs:</b>	\$ 1,952	\$ 3,922	\$	7,683	\$	13,557	\$ 7,683
(e)	(c) - (d)	Lost Java ME Profits	\$ 9,150	\$ 18,383	\$	36,014	\$	63,547	\$ 36,014
<b>(f)</b>		Percent of Lost Java ME Sales Due to Android <sup>8</sup>	14.8 %	38.6 %		43.9 %			44.9 %
( <b>g</b> )	(e)*(f)	Lost Java ME Profits Due to Android	\$ 1,353	\$ 7,094	\$	15,807	\$	24,254	\$ 16,169
(h)		Apportionment Percentage <sup>9</sup> (2009-2012)	5.1 %						
(i)	(g)*(h)	Apportioned Lost Java ME Profits Due to Android	\$ 69	\$ 360	\$	803	\$	1,232	\$ 821

#### Notes and Sources:

<sup>&</sup>lt;sup>1</sup> Strategic Forecast, OAGOOGLE0100164541. The forecast is the "High" case which assumes a "minor shift to open source" regarding Java ME revenues. All Java "Mobile/Embedded" Revenue includes Java ME and related service revenues, as well as engineering, developer support, and CDS/Mobility Solutions revenues. This does not include Java Card or Java FX. Forecasted revenue is held constant at the FY2010 level, through FY2012.

<sup>&</sup>lt;sup>2</sup> Same as footnote (1), but includes only Java ME and related service revenues. Forecasted revenue is held constant at the FY2010 level, through FY2012.

<sup>&</sup>lt;sup>3</sup> 2009 and 2010 Java Mobile revenue is from Java Billings Summary, OAGOOGLE0100167800. Includes License, Access, Support, and Services mobile revenues. 2011 revenue is the first two months of the 2011 fiscal year July and August - about \$12.35 million - annualized by multiplying by six. 2012 revenue is equal to 2011 revenue.

<sup>&</sup>lt;sup>4</sup> Actual Java ME Revenues multiplied by 7.58%. 7.58% is the percentage of costs of goods sold out of revenues in fiscal year in 2006 for Java ME. See FY07 MEP Business presentation, 2007, OAGOOGLE0005039944 at 946.

<sup>&</sup>lt;sup>5</sup> Actual Java ME Revenues multiplied by 10.00%. 10.00% is the percentage of sales expenses out of revenues in fiscal year in 2006 for Java ME. See FY07 MEP Business presentation, 2007, OAGOOGLE0005039944 at 946.

<sup>&</sup>lt;sup>8</sup> Factor that accounts for lost Java ME sales attributable to Android. See Exhibit 4b, row (g) of October 3, 2011 Report of Dr. Alan Cox.

<sup>&</sup>lt;sup>9</sup> 5.1% is Dr. Cockburn's lower bound for the Apportionment of Copyrights under his "Group and Value Approach." See Exhibit 35 and ¶7 of Feburary 3, 2012 Expert Report of Dr. Iain M. Cockburn.

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# Exhibit 6a Updated Royalties

# Danger's and Handset Manufacturers' Java ME Licenses January 2008 - September 2011

#### Scenario 1

	Sales	of All Models of And	droid (U.S.)	Sales of A	all Models of	Android (W	vorldwide) <sup>2</sup>	Sales of Accused Models Only (Worldwide)				
Royalty	Units	Royalties Apportionment <sup>1</sup>		Units Royalties			Apportionment <sup>1</sup>	Units	Royalties	Apportionment <sup>1</sup>		
(1)	(2)	(3)	(4)	(5)		6)	(7)	(8)	(9)	(10)		
Danger Royalty (Scenario 1) 3	77,028,772	\$ 30,717,282	\$ 1,785,608	178,228,621	\$ 71,	073,426	\$ 4,131,528	17,329,883	\$ 10,112,855	\$ 587,864		
OEM Royalty 4	77,028,772	30,262,687	1,759,182	178,228,621	70,	021,589	4,070,384	17,329,883	7,222,442	419,844		
Total:		\$ 60,979,969	\$ 3,544,791		\$ 141,	095,015	\$ 8,201,911		\$ 17,335,297	\$ 1,007,708		

#### Scenario 2 (Danger Royalty Doubled)

	Sales	of All Models of Android (U.S.)				Sales of All Models of Android (Worldwide) <sup>2</sup>					Sales of Accused Models Only (Worldwide)					
Royalty Units				Royalties	Apportionment <sup>1</sup>		Units	Royalties		Apportionment <sup>1</sup>		Units	Royalties		Apportionment <sup>1</sup>	
(1)		(2)		(3)		(4)	(5)		(6)		(7)	(8)		(9)		(10)
Danger Royalty (Scenario 2)	5	77,028,772	\$	60,684,564	\$	3,527,619	178,228,621	\$	140,411,508	\$	8,162,179	17,329,883	\$	19,475,710	\$	1,132,131
OEM Royalty	4	77,028,772		30,262,687		1,759,182	178,228,621		70,021,589		4,070,384	17,329,883		7,222,442		419,844
Total	l:		\$	90,947,251	\$	5,286,801		\$	210,433,097	\$	12,232,563		\$	26,698,152	\$	1,551,975

Sources: Sales of All Models of Android (U.S.) from "Worldwide Quarterly Mobile Phone Tracker, 2Q 2011 Final & Forecast Data Cuts - NERA," IDC Research, Inc., September 8, 2011.

Sales of Accused Models Only (Worldwide) from Google's Activation Data for Accused Models, received from the client on September 29, 2011.

Sun/Oracle Java ME Licensing Agreements.

#### Notes:

- <sup>1</sup> I conservatively use Dr. Cockburn's apportionment percentage of 5.1% with an upward adjustment to account for technical and engineering support. See Cockburn February 3, 2012 Report, ¶414.
- <sup>2</sup> I use a weighted average ratio of Worldwide sales to North American sales to estimate the number of worldwide Android units and royalties. I calculate the ratio based on 2008-2011 data provided by Strategy Analytics. See "Global Smartphone Sales Forecast by Operating System and Region," Strategy Analytics, January 2011.
- <sup>3</sup> See Exhibits 6b.1 of October 3, 2011 Report of Dr. Alan Cox.
- <sup>4</sup> See Exhibit 6c of October 3, 2011 Report of Dr. Alan Cox.
- <sup>5</sup> See Exhibits 6b.2 of October 3, 2011 Report of Dr. Alan Cox.

<sup>&</sup>quot;Global Smartphone Sales Forecast by Operating System and Region," Strategy Analytics, January 2011.

Appendix A

**NERA** 

**Economic Consulting** 

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# Alan J. Cox

# **Education**

# University of California, Berkeley

Ph.D., Business Administration, Economic Analysis and Policy Program, 1989 Major Fields: Industrial Organization, Finance, Econometrics

# **University of British Columbia**

M.A., Economics, 1978

# **York University, Toronto**

B.S., Environmental Science, 1976

# **Professional Experience**

2001-	NERA Economic Consulting Senior Vice President
1998-2001	Vice President
1994-1998	Senior Consultant
1988-1989	Senior Analyst
1989-1994	Law & Economics Consulting Group, Inc. Vice President and Senior Economist
1983-1989	University of California, Berkeley Research Assistant.

Alan J. Cox

**Minimax Research Corporation** 

1985-1986 Economist

**Massachusetts Institute of Technology** 

1978-1981 Visiting Economist

**University of British Columbia** 

1978 Research Associate

**Geological Survey of Canada** 

1975 Field Party Leader, Western Arctic

# **Teaching Experience**

St. Mary's College of California

1994-1995 Visiting Lecturer, Graduate School of Management

Taught Industrial Structure and Competitive Strategy.

**Northeastern University** 

1989 Adjunct Lecturer, Graduate School of Management

Taught Managerial Economics.

University of California, Berkeley

1984-1985 Teaching Assistant

Taught Intermediate Microeconomics.

# Honors

16th Annual Telecommunications Policy Research Conference, Finalist, Graduate Student Paper Contest, 1988

Ph.D. Fellowship, Social Sciences and Humanities Research Council of Canada, 1981

Special M.A. Fellowship, Social Sciences and Humanities Research Council of Canada, 1976

Tina and Maurice Wagner Foundation Fellowship, University of British Columbia, 1976

York University In-Course Scholarship, 1975

# **Expert Testimony, Affidavits, and Reports**

<u>Global Building Products, Ltd., et al</u> v. Chemco Inc., et al, International Centre for Dispute Resolution Case No. 50133T0026511.

*Testimony* at arbitration hearing on January 26, 2012, *Expert Rebuttal Report* on January 6, 2011, *Deposition* on December 30, 2011 and *Expert Report* on December 5, 2011 on behalf of claimants regarding damages resulting from breach of contract and the alleged misrepresentation by respondents regarding the scope of an exclusive licensing agreement.

In the Matter of: Certain DC-DC Controllers and Products Containing the Same
U.S. International Trade Commission Investigation No. 337-TA-698

Expert Rebuttal Report on January 12, 2012, Deposition on December 27, 2011 and Expert Report on December 2, 2011 on behalf of enforcement complainants, RichTek Technology

Corporation and RichTek USA regarding economic benefits to respondent as a result of respondent's non-compliance with Consent Order and respondent's ability to pay fine, and on the need for a general exclusion order.

<u>Point 4 Data Corporation and Dynamic Concepts, Inc.</u> v. Tri-State Surgical Supply & Equipment, Ltd., et al., USDC (E.D.N.Y.) Case No. 11-cv-0726 (RJD)

*Expert Report* dated November 30, 2011 on behalf of plaintiffs regarding economic damages as a result of alleged copyright infringement by defendants.

<u>New York Shipping Ass'n, Inc. et al.</u>, v. Int'l Longshoremen's Ass'n, AFL-CIO et al., USDC for the District of New Jersey Case No. 10-cv-6261 (DRD) (MAS)

Report dated October 4, 2011 on the economic damages sustained by plaintiffs as a result of

Report dated October 4, 2011 on the economic damages sustained by plaintiffs as a result of work stoppage.

*Oracle America, Inc. v. <u>Google Inc.</u>*, USDC, Northern District of California, San Francisco, Case No. CV 10-03561 (WHA).

Deposition on October 26, 2011 and Expert Reply Report dated October 3, 2011 on behalf of defendant regarding damages to plaintiff from alleged infringement of a copyright claim.

Research Electro-Optics, Inc. v. <u>Precision Photonics Corporation, Nick Traggis and Christopher</u> <u>J. Myatt</u>, District Court, Boulder County, Colorado Case No. 2010cv1025 Deposition on September 16, 2011 and Expert Report dated August 6, 2011.

<u>Rawlings Sporting Goods Company, Inc.</u> v. Under Armour, Inc. and AMPAC Enterprises, Inc., USDC for the Western District of Washington at Seattle, Case No. 10-cv-0933 MJP. Expert Report on behalf of plaintiff dated June 10, 2011.

<u>International Fireproof Technology, Inc.</u>, et al v. Flame Seal Products, Inc., et al, USDC for the Southern District of Texas, Houston Division Case No. 2011-cv-419. Expert Report on behalf of plaintiffs dated April 19, 2011.

In the matter of: <u>City of Dana Point</u> v. Commissioner of Internal Revenue Report "Percent of California Cities that Used Independent Contractors as Instructors of Recreational Classes of the Type Offered by Dana Point in 2004," dated April 11, 2011.

Qimonda North America Corporation, etc. v. <u>G2 Technology, Inc.</u>, etc., American Arbitration Association.

Arbitration Testimony on February 23, 2011 and Deposition on December 22, 2010.

### Expedia, Inc. and Expedia Italy S.r.l.

Report on certain aspects of Expedia's interaction with credit card system dated December 27, 2010.

*Pegasus Imaging Corporation v. Northrop Grumman Corporation, et al.*, USDC (Middle District of Florida, Tampa Division) Case No. 8:07-cv-01937

Deposition on July 2, 2010 and Rebuttal Expert Report dated June 3, 2010 on behalf of defendants regarding economic damages allegedly suffered by plaintiff as a result of defendants' breach of license agreement and copyright infringement.

BlueGem Security, Inc. v. <u>Trend Micro Incorporated</u>, USDC (C.D. Cal), Case No. CV08-01492 ODW (FFMx)

*Trial testimony* on September 28, 2010, *Deposition* on August 27, 2010 and *Expert Report* on March 30, 2010 on behalf of defendant regarding damages arising out of defendant's alleged infringement of plaintiff's technology.

<u>Acologix, Inc.</u> v. Toray Industries, Inc., before the Japan Commercial Arbitration Association Arbitration testimony on April 26, 2010, Expert Rebuttal Report dated April 21, 2010 and Expert Report on March 31, 2010 on behalf of plaintiff for damages arising out of defendant's breach of licensing and supply agreements.

#### Meca Solar v. ET Solar

Arbitration Testimony on March 4, 2010 and Expert Rebuttal Report on February 22, 2010, on behalf of respondent, on damages due to alleged misappropriation of trade secrets.

MedImmune, LLC v. <u>PDL Biopharma, Inc.</u>, USDC (N.D. Cal) Case No. CV 08 5590 JF Deposition on October 7, 2010, Expert Rebuttal Report on September 15, 2010, Expert Report on August 23, 2010 and Expert Report on February 16, 2010, on behalf of defendant/counterclaimant regarding reasonable royalties owed for plaintiff's/counter defendant's alleged patent infringement.

*Veronica Gutierrez, et al. v. Wells Fargo & Company, et al.*, USDC (N.D. Cal) Case No. C 07-05923 WHA (JCSx)

*Trial testimony* on May 7, 2010, *Deposition* on February 5, 2010 and *Expert Report* dated January 27, 2010 on behalf of defendant, in response to plaintiffs' experts' calculation of damages suffered as a result of defendant's methods of charging overdraft fees on its customers' checking accounts.

In re Application of San Pablo Bay Pipeline Company LLC for Approval of Tariffs for San Joaquin Valley Crude Oil Pipeline (Application No. 08-09-024 before the Public Utilities Commission of the State of California)

*Testimony and Cross Examination* on May 18, 2010, *Rebuttal testimony* on April 15, 2010 and *Direct testimony* on behalf of <u>Chevron Products Company</u> regarding the market power of San Pablo Bay Pipeline Company, a division of Shell Oil, dated November 16, 2009.

<u>Pioneer Drive, LLC</u> v. Nissan Diesel America, Inc., et al., USDC (District of Montana, Missoula Division) Case No. CV 08-115-M-DWM

Expert Report dated October 1, 2009, on behalf of plaintiff, regarding damages suffered due to defendants' alleged breach of joint venture agreement.

<u>Ricardo Alfonso Leon, et al.</u> v. Jose Francisco Leon, et al, Los Angeles County Superior Court Case No. BC 376704, related to Case No. BP 069765

Deposition on August 21, 2009, on behalf of plaintiffs, assessing of damages for misappropriated assets.

*Mike Alexandros, et al. v. <u>KOR Electronics, Inc.</u>, et al.*, Orange County Superior Court Case No. 06-CC-07881.

*Trial* testimony on January 27, 2010, *deposition* testimony on April 29, 2009, regarding damages to minority shareholder plaintiffs as a result of alleged fraud and breach of fiduciary duty by controlling shareholder defendants.

<u>Tarlton Pauley Morton</u> v. Peter Morton, et al., Los Angeles County Superior Court Case No. BC 364390

Deposition on March 16, 2009 regarding valuation of "Hard Rock" trademark.

*In re Textainer Financial Services Corporation, et al.*, San Francisco County Superior Court Case No. CGC 05-440303

Deposition on damages due to alleged breach of fiduciary duty, February 6, 2008.

*In re REMEC Incorporated Securities Litigation, et al.*, USDC (S.D. Cal) Case No. 04 CV 1948 JM (AJB)

Deposition on March 11, 2009; Expert Rebuttal Report, dated February 3, 2009, Expert Report dated December 23, 2008 and Declaration in Support of Defendants' Motion for Summary Judgment or, Alternatively, Partial Summary Judgment, regarding loss causation and reliance, dated September 22, 2008.

Dong Ah Tire & Rubber Co. Ltd. v. Glasforms, Inc., v. CTG International, Inc. and Taishan Fiberglass, Inc., et al., USDC (N.D. Cal) Case No. C06-03359-JF (RS) (Consolidated with Case No. C06-00213 JF(RS))

*Trial testimony* on September 10, 2009, *Deposition* on April 28, 2009 and *Expert Rebuttal Report*, dated October 10, 2008, on behalf of third-party defendants <u>CTG International, Inc. and Taishan Fiberglass, Inc.</u>, rebutting plaintiff's expert's report claiming commercial damages for recall costs, lost profits, and costs to repair reputation due to third-party defendants' supplying allegedly defective fiberglass.

E. & J. Gallo Winery v. <u>EnCana Corporation</u>, et al, USDC (E.D. Cal) Case No. CV F 03-5412 AWI LJO

Deposition on May 21, 2009 and Revised Rebuttal Report dated April 1, 2009.

Silicon Image, Inc. v. <u>Analogix Semiconductor, Inc.</u>, USDC (N.D. Cal) Case No. C 07-00635 JCS

*Deposition* on September 19, 2008, *Rebuttal Report*, dated August 8, 2008, on behalf of defendant, Analogix, on damages as a result of alleged patent infringement, misappropriation and intentional interference with contractual relations and unfair competition.

 $\underline{Applera\ Corporation-Applied\ Biosystems\ Group}\ v.\ Illumina\ Inc.,\ Solexa,\ Inc.\ and\ Stephen\ Macevicz,\ et\ al.,\ USDC\ (N.D.\ Cal)\ Case\ No.\ 07\ CV\ 02845\ WHA$ 

*Trial testimony* on January 21, 2009, *Supplemental Rebuttal Expert Report*, dated October 3, 2008, *Deposition* on June 24, 2008, *Expert Rebuttal* Report, dated June 13, 2008 and *Expert Report*, dated May 30, 2008, on behalf of plaintiff, Applera Corporation - Applied Biosystems Group, on damages relating to the misappropriation of patents by defendants.

Ajaxo, Inc. and K.C. Multimedia, Inc. v. Bank of America Technology And Operations, Inc., <u>Bank of America Corporation</u>, Bank of America National Association and Allen Tam, USDC (E.D. Cal) Case No. 2:07-cv-945 GEB GGH

*Rebuttal Report*, dated August 8, 2008 on behalf of defendant, Bank of America, on damages relating to alleged copyright infringement.

The Board of Trustees of the Leland Stanford Junior University and Litton Systems, Inc. v. Tyco International, et al., USDC (C.D. Cal) Case No. Cv-00-10584-TJH-(RCx)

Deposition on June 5, 2008 and Expert Report dated May 20, 2008, on behalf of defendant Pirelli S.p.A., on reasonable royalty damages as a result of alleged patent infringement by Pirelli.

<u>Lite-On IT Corp. and Lite-On (USA) International, Inc.</u> v. Toshiba Corporation, USDC (C.D. Cal) Case No. CV07-4758 GPS (AJWx)

*Deposition* on November 19, 2008, *Rebuttal and Supplemental Expert Report*, dated November 11, 2008 and *Expert Report* on damages resulting from alleged fraud, dated October 7, 2008.

All American Semiconductor, Inc. v. Hynix Semiconductor, Inc., et al., Case No. C 07-01200 PJH; DRAM Claims Liquidation Trust, By Its Trustee, Wells Fargo Bank, N.A. v. Hynix Semiconductor, Inc., et al., Case No. C 07-1381 PJH, Edge Electronics, Inc. v. Hynix Semiconductor, Inc., et al., Case No. C 07-01207 PJH, Jaco Electronics, Inc. v. Hynix Semiconductor, Inc., et al., Case No. C 07-01212 PJH, Sun Microsystems, Inc., et al. v. Hynix Semiconductor, Inc., et al., Case No. C 06-01665 PHJ, UNISYS Corporation v. Hynix Semiconductor, Inc., et al., Case No. C 06-02915 PJH

Deposition on April 22, 2008 and Expert Report dated March 7, 2008 on liability arising from alleged participation in a price fixing cartel on behalf of defendant, Nanya Technology.

3Com Corporation v. <u>Realtek Semiconductor Corporation</u>, USDC (N.D. Cal) Case No. CV-03-2177VRW

*Trial testimony* on April 2, 2008, *Deposition* on November 6, 2007, and *Expert Rebuttal Report*, on behalf of defendant, regarding reasonable royalty damages due to defendant's alleged infringement of patents, October 19, 2007.

<u>Interface, Inc.</u> v. Shaw Industries, Inc., Mohawk Industries, Inc., and Collins & Aikman Floor Coverings, Inc., USDC (N.D. Georgia) Case Nos. 4:05 CV-0189-HLM, 4:05-CV-0190-HLM, and 4:05-CV-0191-HLM

Deposition on December 13-14, 2007, Expert Surrebuttal Report, dated October 29, 2007 and Expert Report, dated September 13, 2007, on behalf of plaintiff regarding damages arising from infringement of patent on carpet design.

<u>OMAX Corp.</u> v. Flow International Corp., Case No. CV 04-2334-RSL Deposition dated June 7-8, 2007, Expert Rebuttal Report dated April 13, 2007 and Expert Report dated March 2, 2007.

<u>Melvin Gene Snow, et al.</u> v. Lenscrafters, Inc., et al., San Francisco County Superior Court Case No. CGC-02-405544

Declaration on class certification issues, January 29, 2007.

Securities and Exchange Commission v. <u>Alexander J. Yaroshinsky, Sofia K. Yaroshinsky, and Victor E. Zak, USDC (S.D. N.Y.)</u> Case No. 06cv2401

Expert Rebuttal Report, on behalf of defendants, regarding the materiality of alleged inside information, December 1, 2007.

<u>Nara Bancorp, Inc. and Nara Bank</u> v. Benjamin B. Hong, Arbitration Case No. 72 166 00775 06 A, CJ

Arbitration testimony before the American Arbitration Association, Los Angeles, May 15, 2007. Testimony on materiality, unjust enrichment from insider trading and harm to reputation as a result of withholding of material information.

# **PUBLICATIONS**

"The Demise Of Junk Science And The 25% Rule," column published in *IPLaw360*, 29 July 2010, with Stephen Rusek. It discusses the use of the so-called 25 Percent Rule which the writers point out has no rational, scientific, or business basis. This lack of principal combined with the *ad hoc* manner in which the purported rule is implemented can also give wildly unpredictable results.

"Three Cases Reshaping Patent Licensing Practice," article published in *Managing Intellectual Property*, 1 March 2010, with Dr. Elizabeth M. Bailey and Dr. Gregory K. Leonard.

"Compensatory Damages Issues in Patent Infringement Cases: A Handbook for Federal District Court Judges." Participation, with committee members, which included legal practitioners, trial judges, damages experts, and academics, in the development of a handbook for trial courts to consult on procedural practices that may be helpful in the management and adjudication of damages issues in patent cases. 20 January 2010.

"2 Economists' Take On <u>i4i V. Microsoft</u>," column published in *Law360*, 23 November 2009, with Mario Lopez, reviewing the damages raised in the CAFC's hearings in the I4I case and the appropriate standards for estimating damages in patent infringement cases.

"Intellectual Property Rights Protection in China: Economic Damages Still Need Improving," Oliver Wyman Journal, pp. 93-94, Spring 2009, with Kristina Sepetys.

"Intellectual Property Rights Protection in China: Trends in Litigation and Economic Damages," working paper, 13 February 2009, with Kristina Sepetys (English and Chinese versions).

"Intellectual Property Rights Protection in China: Litigation and Economic Damages, and Case Strategies," *Thompson/West* 197 Supp. 4 (March 2006), pp. 401-421.

"Intellectual Property Rights Protection in China: Litigation and Economic Damages" with Sepetys, Kristina. *Global Intellectual Property Asset management Report* Volume 8, Number 1 (January 2006), p. 1, 18-22.

"Intellectual Property Rights Protection in China: Litigation and Economic Damages, and Case Strategies," with Sepetys, Kristina. *Economic Approaches to Intellectual Property Policy, Litigation, and Management*, ed. Gregory K. Leonard and Lauren J. Strioh (New York: NERA Economic Consulting, 2005).

"The Frequently Forgotten Benefits of Price Discrimination," *Economics of Antitrust - New Issues, Questions, and Insights*, ed. Dr. Lawrence Wu (White Plains: National Economic Research Associates, 2004), 99-107.

"A Better Consumer Survey for Better Damages," IP Value Commentator, (April 2003).

# PRESENTATIONS AND WORKING PAPERS

Presentation to Latham & Watkins, LLP titled "Current Use of Economic Analyses in Class Certification in Securities Fraud Matters" with NERA colleague Stefan Boettrich in New York City on January 12, 2012.

Participation, in "The Lifecycle of a US 'Class Action' Lawsuit: What Chinese Companies Need to Know," hosted by Marsh: Beijing, China, November 1, 2011.

"Recent trends in US patent litigation and the impact on non-US companies" at the 8<sup>th</sup> Annual Asia-Pacific IP Forum in, Kowloon, Hong Kong on September 29, 2011.

"International Trends in Securities Fraud Litigation and the Impact on Chinese Companies," presentation with NERA colleague Mark Berenblut, hosted by the Hong Kong Society of Financial Analysts on September 27, 2011 in Hong Kong. Dr. Cox discussed the economics of damages claims in lawsuits alleging securities fraud by directors and officers of companies listed on the US and other stock exchanges.

"Comparables: the use and misuse of benchmark royalty rates for patent damages," hosted by Dewey LeBeouf, San Francisco on July 12, 2011. Dr. Cox addressed the role of licenses and industry benchmarks in the determination of reasonable royalties.

Panelist at the "Stanford IP Seminar for Intellectual Property Judges from The People's Republic of China," hosted by Stanford Law School May 23-27, 2011. Dr. Cox and co-panelist, USDC for the Northern District of California, Elizabeth D. Laporte, Magistrate Judge, discussed current United States intellectual property law and patent damages.

"Licensing and Litigating Reasonable Royalties for the Patents in Technical Standards," hosted by the Austin Chapter of Licensing Executives Society (LES) on May 31, 2011. Dr. Cox discussed the difficulties in defining a Fair, Reasonable, and Non-Discriminatory (FRAND) royalty, an issue that often results in litigation.

"Implications of Recent Legal Developments on the Handling of Patent Cases in the Trial Court." Dr. Cox discussed the evolving standards in damages estimation at the patent litigation presentation to the District Judicial Council for the Southern District of California on April 25, 2011 in Dana Point, CA.

"The Convergence of Recent Case Law and How the *Uniloc*, *ResQnet* and *Cornell* Federal Circuit Decisions May Impact the Value of Your IP," hosted by the San Francisco Chapter of Licensing Executives Society (LES) on March 30, 2011. Dr. Cox participated in a discussion of the CAFC's rulings in *Uniloc*, *ResQnet*, *Cornell*, and other cases.

"Unlocking *Uniloc*: Meeting the Court's New Evidentiary Standards for Reasonable Royalties," one of a series of roundtable discussions hosted by NERA in San Francisco on March 3 and Palo Alto, California on March 4, 2011.

Moderator, "Uniloc v. Microsoft: A Key New Ruling For Patent Damages," expert analysis telebriefing hosted by Law Seminars International on January 21, 2011.

Presentation to Allen and Overy LLP and to Ashurst LLP titled "The Simple Economics of Reasonable Royalties for Patents Incorporated into a Technical Standard," in London on December 6, 2010.

"Trends in Intellectual Property Protection and Antitrust Enforcement in China," seminar hosted by NERA in San Francisco on November 3, 2010.

Presentation at Foley & Lardner LLP's "Eye on China Roundtable Series," by Dr. Cox with Victor Xue, Executive Vice-President, US-China Green Energy Council and Catherine Sun, Managing Partner, Foley & Lardner Shanghai Offices, titled "IP Enforcement in China 2010: Myth or Reality?" given in Palo Alto on November 1, 2010.

Silicon Valley Chapter of Licensing Executives Society, Panelist, "Licensing and Litigating Reasonable Royalties for the Patents in Technical Standards," September 22, 2010.

"Tips for Determining 'Reasonable' Royalties: The impact of recent case law on the economic analysis." Presentations at conference on "Legal Issues In Software Development," sponsored by Law Seminars International on June 16, 2010, in Seattle, WA.

Presentation to ZTE Corporation on June 4, 2010 in ShenZhen, China on patent infringement damage calculations in the United States.

Presentation to the Supreme People's Court of the People's Republic of China, including Chief Justice Kong Xiangiun, on May 26, 2010. Dr. Cox, together with NERA colleague, Dr. Fei Deng, discussed the methods used in the United States to calculate damages in patent, trade secret, and trademark infringement litigation. They also discussed antitrust issues related to intellectual property.

"Infringement Decisions and Judgments: Important Lessons from High Profile Cases," presented at the 2<sup>nd</sup> Annual Anti-Monopoly & Competition Law Summit held May 25-27 in Beijing. Dr. Cox discussed the differing treatment of *Intel* in jurisdictions around the world.

Panelist, "Trade Secret Remedies—Getting Creative," one-hour webinar hosted by the Intellectual Property Owners Association IP Chat Channel on April 1, 2010.

"Using Economics to Accurately Valuate IP," presentation with colleagues, Stephen Rusek and Dr. Mario Lopez, given at the Fenwick & West LLP Mountain View office on February 25, 2010.

"Damage Quantification in Patent Litigation: Putting the 'Reasonable' in Reasonable Royalty Rate Determinations," seminar hosted by NERA in Toronto, Canada on December 9, 2009. Dr. Cox and colleague, Mark Berenblut discussed patent valuation and reasonable royalties.

"Groundhog Day: Recurring Themes on Reasonable Royalties in Recent IP Damage Cases," NERA working paper, December 7, 2009, with colleagues Dr. Elizabeth M. Bailey and Dr. Gregory K. Leonard.

"Economic Basis for Damages Awards in United States Patent Litigation," a lecture on damages in patent infringement matters given at the University of Washington, School of Law, on October 20, 2009.

"Damages and Economic Analysis of Liability in International Context," presented by Dr. Alan Cox at the ABTL's 36<sup>th</sup> Annual Conference, "Lost in Translation: Cross-Border Litigation Tactics and Strategies." The conference took place at The Broadmoor, Colorado Springs, CO on October 1-4, 2009.

Moderator, "Trying Damages in a Patent Case: The Impact of Some Recent Decisions," teleconference organized by Law Seminars International on September 29, 2009. Dr. Cox, joined by colleagues Dr. David Blackburn (NERA); Richard F. Cauley of Wang, Hartmann; James W. Morando of Farrella Braun, and Darin W. Snyder of O'Melveny & Myers, discussed trends in Federal Circuit patent damages decisions.

"Entire Market Value Rule and Apportionment in Calculating Patent Damages." Presentation with Gregory Leonard given at Latham & Watkins LLP in San Francisco, CA on August 6, 2009.

"Impact of Patent Purchase and Patent Reform on Enforcement Damages," presented by Dr. Alan Cox at the ICAP / Ocean Tomo 2009 IP Markets Conference and Patent Auction held in Chicago, IL on July 22-23, 2009.

"Patent Damages," a conference presented by Law Seminars International on April 20, 2009 in San Francisco, CA, co-chaired by Alan Cox and Alexander Brainerd, Esq., Sonnenschein Nath & Rosenthal LLP.

"Antitrust and Intellectual Property Economics and Litigation in China" seminar, sponsored by NERA Economics Consulting. Dr. Cox, with Fei Deng and Gregory Leonard presented an overview of recent trends in the Chinese business and legal climate in Washington, D.C. on April 16, 2009, and in San Francisco on April 23, 2009.

"Hot Topics in Copyright Trademark and Patent Law." Session organized and moderated at the ABA's 24th Annual Intellectual Property Conference in Arlington, VA: "The Supreme Court's Effect on patent Licensing and Litigation Practice." April 4, 2009.

- "Trends in Damage Awards for Intellectual Property Infringement in the People's Republic of China." Presentation to the American Society of International Law at its March 25, 2009 annual meeting in Washington, D.C. Dr. Cox discussed the current status of judicial enforcement of intellectual property rights and the impact of revisions in the Patent Law.
- "Shareholder Class Action Litigation Recent Trends." Presentation to the Arizona Chapter of the National Association of Corporate Directors Institute, on March 3, 2009 in Scottsdale, Arizona. Dr. Cox discussed recent trends in shareholder class action litigation and the ways in which Board members can be on top of this issue.
- "Basic Economic Analysis in Securities Class Action," a lecture on damages in securities fraud matters given at the University of Washington, School of Law, on February 25, 2009.
- "An Economic View on Current Issues in Reasonable Royalty Analyses," Presentation to Wilson Sonsini Goodrich & Rosati, Palo Alto, California on January 29, 2009.
- "A Short Course in Economics: Lecture 1, Supply and Demand," at O'Melveny & Myers LLP of San Francisco on January 28, 2009.
- "Antitrust Problems in Standard-Setting" presented at the conference on China's Antimonopoly Law and Regulation on Abuse of Intellectual Property Rights, hosted by the China Society for World Trade Organization Studies under MOFCOM, on April 27, 2008 in Beijing, China.
- Panelist, "Recent Antitrust Enforcement Activity in the Payment Card Industry: A TransAtlantic View," telephone Brownbag Program hosted by The Financial Services Committee of the American Bar Association Section of Antitrust Law on February 22, 2008 in Washington, DC.
- "Trends in Securities Class Actions and Issues in Subprime Litigation," a conference presented by the Oregon State Bar Regulations Section in Portland, Oregon on January 16, 2008.
- "Innovative Strategies for Litigating Class Action Suits," a conference presented by Law Seminars International on November 12-13, 2007 in Los Angeles, California. Presentation by Alan Cox entitled "Role of Expert Testimony Economic Experts: Strategies to employ experts, when and how to effectively use them."
- "Standards Bodies & Patent Pools Key Legal and Business Developments," a conference presented by Law Seminars International on October 11-12, 2007, in Arlington, VA. Dr. Alan Cox delivered a presentation entitled "Tips for Determining 'Reasonable' Royalties," with Gil Ohana, Esq., of Wilmer, Cutler, Pickering, Hale and Door LLP.
- "Calculating & Proving Patent Damages," Law Seminars International Advanced Workshop. Program Co-Chair with Darylyn Durie. Presentation entitled, "Getting the Data You Want From the Other Side through Discovery and 30(b)(6) Depositions," given in San Francisco, February 27-28, 2006.

"Standard Setting, Market Power and Intellectual Property Value," given in Portland, Oregon on April 26, 2005; Seattle, Washington on April 27, 2005 and in San Francisco on April 28, 2005.

"Economic Basis for Damages Awards in United States Patent Litigation," presented to the Guangdong Intellectual Property Protection Association and Guangdong Intellectual Property Office in Guangzhou, China on November 10, 2004.

"Calculating and Proving Patent Damages," Law Seminars International Advanced Workshop. Program Co-Chair with F. Ross Boundy (Christen O'Connor Johnson Kindness, LLP). Speech entitled, "The Law and the Economics: Why you Need to do Rigorous Economic Analysis in Order to Develop a Case," given at the Washington State Convention and Trade Center in Seattle, Washington on November 2, 2004.

"Calculating and Proving Patent Damages," Law Seminars International Advanced Workshop. Program Co-Chair with James E. Hartley (Holland & Hart LLP). Speech entitled, "The Law and the Economics: Why you Need to do Rigorous Economic Analysis in Order to Develop a Case," given at the Denver Marriott City Center on September 20, 2004.

"Key Issues Facing Boards of Directors: The Revolution in SEC Disclosure & Enforcement," Presentation co-hosted by the Directors Roundtable and Bingham McCutchen for boards of directors and their advisors at a session in Santa Clara, CA on March 4, 2004.

"Key Issues Facing Boards of Directors: The Revolution in SEC Disclosure & Enforcement," Presentation co-hosted by the Directors Roundtable and Akin, Gump, Strauss, Hauer & Feld for boards of directors and their advisors at a session in San Francisco, CA on January 13, 2004.

"Advanced IP Licensing Transactions - Business and Legal Issues," Law Seminars International Comprehensive Workshop. Presentation by Alan Cox about Valuing Intellectual Property, held in Seattle, WA on January 12, 2004.

"Key Issues Facing Boards of Directors: The Revolution in SEC Disclosure & Enforcement," Presentation co-hosted by the Directors Roundtable and Dorsey & Whitney for boards of directors and their advisors at a session in Seattle, WA on December 11, 2003.

"An Advanced Workshop on Calculating & Proving Patent Damages - Recent Developments and New Tools for Success," A conference presented by Law Seminars International on November 12, 2003 in Seattle, WA. Speech entitled, "The Need for More Rigorous Economic Analysis in Proving Damages: An Interplay between Law and Economics," by Program Co-Chairs F. Ross Boundy, Esq. of Christensen O'Connor Johnson Kindness, PLLC and Alan J. Cox of NERA. Also speech entitled, "The Use of Surveys for IP Damage Calculation," by Professor Kenneth E. Train of NERA and "Panel Discussion: Discovery of Expert Drafts and Notes - Reasonable methods of planning for and dealing with expert discovery" by Alyssa Lutz of NERA and others.

"Showing Up When It's Over: Claiming Rates in Shareholder Class Actions," Presentation prepared by Marcia Mayer and Svetlana Starykh given by Alan Cox at the Practising Law Institute conference "Securities Litigation & Enforcement Institute 2003" on October 2, 2003 in San Francisco, CA.

"Calculating and Proving IP Damages - Recent developments, new tools for success," Law Seminars International Advanced Workshop. Program Co-Chairs were Phillip A. Beutel of NERA and Michael R. Levinson of Seyfarth Shaw. Cox Speech entitled, "The Need for More Rigorous Economic Analysis in Proving Damages: An Interplay between Law and Economics," given at the Mid-America Club in Chicago, IL on April 22, 2003.

"Calculating and Proving IP Damages," Law Seminars International Advanced Workshop. Program Co-Chair with Philip J. McCabe, Esq. (Kenyon & Kenyon). Speech entitled, "The Basic Economics of Damages Calculation in Intellectual Property Matters," given at the Grand Hyatt San Francisco on January 13, 2003.

"Basic Economics of Rigorous Intellectual Property Damages Calculation," Presentation with Kenneth Train and Christian Dippon given at Marsh in San Francisco, CA on December 3, 2002.

"Economic Damages in Securities Fraud Matters," NERA Luncheon Seminars with Adam Werner given at the Fifth Avenue Suites Hotel in Portland, OR on November 19, 2002 and at the W Hotel in Seattle, WA on November 20, 2002.

"Basic Economics of Rigorous Intellectual Property Damages Calculation," Presentation with Kenneth Train and Christian Dippon given at Covington & Burling, LLP in San Francisco, CA on November 11, 2002.

"Basic Economic Analysis in Securities Class Action," Presentation given at Skadden, Arps, Slate, Meagher & Flom, LLP in San Francisco, CA on October 30, 2002.

"Key Issues Facing Boards of Directors: The Revolution in SEC Disclosure & Enforcement," Presentation co-hosted by the Directors Roundtable and the Directors Roundtable Business School Council event for boards of directors and their advisors at a session in Seattle, WA on September 24, 2002, in Chicago, IL on October 1, 2002 and in Santa Clara, CA and San Francisco, CA on October 2, 2002.

"Basic Economic Analysis in Securities Class Action," Presentation given to Marsh FINPRO in San Francisco, CA on September 18, 2002.

"Basic Economic Analysis in Securities Class Action," Presentation given to Marsh Risk & Insurance Services in San Diego, CA on September 17, 2002.

"Basic Economic Analysis in Securities Class Action," Presentation given to Marsh FINPRO in Los Angeles, CA on September 13, 2002.

- "Trends in Intellectual Property Litigation and the Impact of Litigation on Valuations," Presentation given to Marsh Seminar on "Managing IP Risks and Rewards" in Montreal, Canada on June 19, 2002.
- "Materiality and Damages in Securities Fraud Cases," Presentation given to Gray, Cary, Ware & Freidenrich Securities Litigation Partners' Meeting given at the Marriott San Diego Del Mar in San Diego, CA on June 8, 2002.
- "Testing Market Efficiency," Presentation given to the Securities Litigation Sub-Committee of the Colorado Bar Association at Holland & Hart, LLP in Denver, CO on April 17, 2002.
- "Trends in Intellectual Property Litigation," Presentation with Jesse David given to the Licensing Executives Society, Silicon Valley Chapter, hosted by Cadence Design Systems, Inc. in San Jose, CA on March 27, 2002.
- "Using an Economic Expert in Commercial Litigation," Speech given to Gibson, Dunn & Crutcher in Palo Alto, CA on March 20, 2002.
- "IP Damages: Getting and Paying the Right Amount," Speech given at the American Conference Institute's 7<sup>th</sup> National Advanced Forum on "Litigating Patent Disputes" held in San Francisco, CA on February 28-March 1, 2002.
- "Standard Setting, Market Power and IP Value," Speech given at Weil, Gotshal & Manges in Redwood City, CA on February 13, 2002.

# Documents Reviewed In Connection with Oracle America, Inc. v. Google Inc. U.S. District Court, Northern District of California, San Francisco Case No. CV 10-03561 WHA

### **Deposition Transcripts**

- Iain Cockburn deposition transcripts dated October 17, 2011 and February 10, 2012.
- Alan Cox deposition transcript dated October 26, 2011.
- Gregory Leonard deposition transcript dated October 28, 2011.
- Dr. Mark Reinhold deposition transcript dated February 15, 2012.

#### **Expert Reports**

- Expert Reply Report of Professor Steven M. Shugan dated October 10, 2011, with accompanying exhibits.
- Reply Reports of Dr. Iain M. Cockburn dated October 10, 2011 and Expert Report dated February 3, 2012, and accompanying exhibits and appendices.
- Rebuttal Reports of Kenneth S. Serwin dated October 10, 2011, with accompanying exhibits.

#### **Legal Documents**

- Declaration of Steven M. Shugan in Support of Oracle's Reply Brief to Google Inc's Opposition to Motion to Exclude Portions of the Expert Reports of Gregory K. Leonard and Alan J. Cox dated November 1, 2011.
- Oracle America, Inc.'s Reply to Google Inc.'s Opposition to Motion to Exclude Portions of the Expert Reports of Gregory K. Leonard and Alan J. Cox dated November 1, 2011.
- Tentative Order Granting In Part and Denying in Part Google's Motion In Limine #3 to Exclude Portions of Dr. Cockburn's Revised Damages Report dated December 6, 2011.
- Request for Further Briefing Order by William Alsup, United States District Judge dated December 27, 2011
- Order Granting in Part and Denying in Part Google's Motion in Limine #3 to Exclude Portions of Dr. Cockburn's Revised Damages Report by William Alsup, United States District Judge dated January 9, 2012.

- Oracle America, Inc's Response to the Court's January 9, 2012 Order on Google Motion In Limine No. 3 (DKT. 685) dated January 17, 2012.
- Google's Memorandum Regarding Whether Dr. Cockburn Should Be Allowed to Submit a Third Damages Report dated January 17, 2012.
- Oracle America, Inc.'s Response to the Court's January 9, 2012 Order on Google Motion In Limine #3 (DKT 685) dated January 17, 2012.
- Google's Reply to Oracle's Response to the Court's January 9, 2012 Order on Google Motion In Limine #3 dated January 19, 2012.
- Oracle America, Inc's Reply to Google's Response to the Court's January 9, 2012 Order on Google Motion In Limine #3 (DKT. 685) dated January 19, 2012.
- Order Conditionally Allowing Dr. Cockburn A Third Damages Report by William Alsup, United States District Judge dated January 20, 2012.
- Oracle America, Inc.'s Response to Court Order of January 20, 2012 (DKT. No. 702) dated January 24, 2012.

#### Web Sites

- https://developer.mozilla.org/en/The\_Mozilla\_platform
- http://en.wikipedia.org/wiki/Open\_source#Computer\_software

#### Bates Numbered Documents Produced by Google, Inc.

• GOOGLE-00303930